



National Aeronautics and  
Space Administration

## Principal Center for Regulatory Risk Analysis and Communication

### ***REGULATORY ALERT***

## Final Rule to Revise the Definition of Solid Waste

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### Introduction

On 7 October 2008, the U.S. Environmental Protection Agency (EPA) published the final rule ([73 FR 64668](#)) to revise the definition of solid waste to exclude certain hazardous secondary materials from regulation under Subtitle C of the Resource Conservation and Recovery Act (RCRA). The purpose of the final rule is to encourage safe, environmentally sound recycling and resource conservation and to respond to several court decisions concerning the definition of solid waste. The final rule will become effective on 29 December 2008.

### Background

On 28 October 2003, EPA published proposed revisions to the definition of solid waste ([68 FR 61558](#)). The 2003 proposal provided an exclusion from the definition of solid waste for hazardous secondary materials (secondary materials such as industrial co-products, byproducts, residues, and unreacted feedstock). EPA received comments disagreeing with this approach and incorporated the comments and restructured the approach of the 2003 proposed rule into a supplemental proposal. EPA published the supplemental proposal on 26 March 2007 ([72 FR 14172](#)) to request comments regarding regulatory factors to be used to determine whether recycling of hazardous secondary materials is legitimate. Hazardous secondary materials are those that would be classified as hazardous waste if discarded and not recycled.

### Summary of the Final Rule

The final rule includes the following exclusions from the definition of solid waste for hazardous secondary materials under the control of the generator:

- Generated and reclaimed by the same generator
- Generated by a generator and reclaimed at a different facility within the same company
- Generated by the generator and reclaimed through a tolling agreement

- The final rule also includes the following exclusions from the definition of solid waste for hazardous secondary materials generated by the generator and transferred to another company for reclamation under specific conditions.
- Deemed non-wastes by EPA through a case-by-case petition process

These exclusions, which do not apply to hazardous secondary materials that are spent lead-acid batteries or listed wastes K171 or K172, or otherwise subject to the specific management conditions under 40 CFR 261.4(a), are discussed in detail in the following sections. The final rule defines legitimate recycling activities to distinguish between these activities and those that are considered hazardous waste treatment, storage, and disposal activities.

The final rule contains the following changes from the March 2007 supplemental proposal:

1. Hazardous secondary materials sent to intermediate facilities are eligible for the exclusion for materials transferred for reclamation. Intermediate facilities are those managing hazardous secondary materials for more than 10 days, other than generators or reclaimers. Generators must perform reasonable effort inquiries on intermediate facilities to confirm that the intermediate facility or reclaimer intends to manage or recycle the hazardous secondary material properly and legitimately. These same conditions apply to reclaimers.
2. Notifications from generators, intermediate facilities, and reclaimers must be submitted before operating under this exclusion and then by March 1 of each even-numbered year using [EPA Form 8700-12](#).
3. Facilities must maintain confirmations of receipt for offsite shipments and documentation and certification of reasonable efforts for 3 years.
4. Exporters must submit annual reports for hazardous secondary materials sent outside the U.S.
5. A minimum standard for satisfying the reasonable efforts condition, before transferring the hazardous secondary material to the reclamation or intermediate facility, is included in the regulations, and these reasonable efforts must be repeated by the generator every 3 years.
6. Legitimacy requirements also are included as conditions for the new exclusions and non-waste determinations.
7. Financial assurance requirements have been tailored to facilities managing hazardous secondary materials.

Conditionally exempt small-quantity generators, facilities that generate less than 100 kilograms (kg) of hazardous waste in a calendar month, are not affected by the final rule, because their wastes are already excluded from regulation. No changes are included in the final rule for recycled materials that are considered inherently waste-like, used in a manner constituting disposal, or burned for energy recovery. Additional details are outlined in the following sections.

### Legitimacy and “Reasonable Efforts”

Many comments submitted in response to the October 2003 and March 2007 proposals, including several from states, requested clarity about enforcing the legitimacy criteria outlined

in the proposals. In the final rule, EPA has included four legitimacy factors, two required factors and two optional factors, for clarification. The two required factors are that 1) the hazardous secondary materials being recycled provide a useful contribution to the recycling process or to the product of the recycling process; and 2) the product of the recycling process is valuable. Processes that do not conform to these two factors cannot be legitimate recycling processes and would be considered sham recycling. Wastes included in sham recycling are not eligible for this exemption. Two additional factors that must be considered when a recycler is making a legitimacy determination include the management of the hazardous secondary materials as a commodity and the presence of elevated hazardous constituents in the product of the recycling process.

To be legitimately recycled, the material must provide a useful contribution to the recycling process, and recycling must make a valuable new product. Under the final rule, generators are required to make “reasonable efforts” before shipping or transferring materials to a reclamation facility to confirm that their materials will be safely and legitimately recycled. This condition would require the generator to perform a type of “environmental due diligence” of the reclaimer in advance. The generator can use any credible evidence available in making the reasonable efforts, including information gathered by the generator, provided by the reclaimer, and/or provided by a third party. NASA Centers would be required to do this for reclamation facilities to which they plan to send their secondary hazardous materials.

## Exclusions from the Definition of Solid Waste

### Generated and Reclaimed by the Same Generator

EPA is revising the definition of solid waste to exclude certain hazardous secondary materials that are generated and legitimately reclaimed within the U.S. under the control of the generator.

Hazardous secondary materials would be considered “under the control of the generator” under the following circumstances:

1. They are generated and then reclaimed at the generating facility.
2. They are generated and reclaimed at different facilities, if the generator certifies that the hazardous secondary materials are sent either to a facility controlled by the generator or to a facility under common control with the generator, and that either the generator or the reclaimer has acknowledged responsibility for the safe management of the hazardous secondary materials.
3. They are generated and reclaimed pursuant to a written agreement between a tolling contractor and toll manufacturer, if the tolling contractor certifies that it has entered into a tolling contract with a toll manufacturer and that the tolling contractor retains ownership of, and responsibility for, the hazardous secondary materials generated during the course of the manufacture, including any releases of hazardous secondary materials that occur during the manufacturing process.

The hazardous secondary materials must be generated and reclaimed in the U.S., contained, and are subject to the speculative accumulation requirements of 40 CFR 261.1(c)(8), as well as the new provisions for legitimate recycling at 40 CFR 260.43. This exclusion does not include recycling hazardous secondary materials that are inherently waste-like under 40 CFR 261.2(d), hazardous secondary materials that are used in a manner constituting disposal

or used to produce products that are applied to or placed on the land (40 CFR 261.2(c)(1)), or hazardous secondary materials burned to recover energy or used to produce a fuel or otherwise contained in fuels (40 CFR 261.2(c)(2)).

#### Generated and Transferred to Another Company for Reclamation under Specific Conditions

EPA is revising the definition of solid waste to exclude certain hazardous secondary materials that are generated and subsequently transferred to a different person or company for the purpose of reclamation. If the hazardous secondary material will be passing through an intermediate facility, the hazardous secondary material generator must make contractual arrangements with the intermediate facility so that the hazardous secondary material is sent on to the reclamation facility or facilities identified by the generator. The generator must perform reasonable efforts on the intermediate facility, as well as on the reclamation facility. Also the intermediate facility must send the hazardous secondary material to the reclaimer(s) designated by the generator.

#### Deemed Non-Wastes by EPA through a Case-by-Case Petition Process

The final rule establishes a voluntary non-waste determination process to allow a generator or petitioner to receive a formal determination from EPA that their hazardous secondary materials are not discarded. The process for the non-waste determination is the same as that for the solid waste variances found in 40 CFR 260.30. There are two types of non-waste determinations:

1. A determination for hazardous secondary materials reclaimed in a continuous industrial process
2. A determination for hazardous secondary materials indistinguishable in all relevant aspects from a product or intermediate

For hazardous secondary materials reclaimed in a continuous industrial process, the non-waste determination must be based on the following four criteria:

1. The extent that the management of the hazardous secondary material is part of the continuous primary production process
2. Whether the capacity of the production process would use the hazardous secondary material in a reasonable time frame
3. Whether the hazardous constituents in the hazardous secondary material are reclaimed rather than discarded to the air, water, or land at significantly higher levels from either a statistical or from a health and environmental risk perspective than would otherwise be released by the production process
4. Other relevant factors that demonstrate the hazardous secondary material is not discarded

For hazardous secondary materials that are indistinguishable in all relevant aspects from a product or intermediate, the non-waste determination will be based on the following five criteria:

1. Whether market participants treat the hazardous secondary material as a product or intermediate rather than a waste
2. Whether the chemical and physical identity of the hazardous secondary material is comparable to commercial products or intermediates

3. Whether the capacity of the market would use the hazardous secondary material in a reasonable time frame
4. Whether the hazardous constituents in the hazardous secondary material are reclaimed rather than discarded to the air, water, or land at significantly higher levels from either a statistical or from a health and environmental risk perspective than would otherwise be released by the production process
5. Other relevant factors that demonstrate the hazardous secondary material is not discarded

### Record-keeping and Reporting Requirements

The final rule requires that hazardous secondary material generators and reclaimers managing hazardous secondary materials reclaimed under the control of the generator submit a notification before operating under this exclusion and by March 1 of each even-numbered year thereafter to the EPA Regional Administrator using [EPA Form 8700-12](#). In states authorized by EPA to administer the RCRA Subtitle C hazardous waste program, notifications may be sent to the state director. The notice must include the information on Form 8700-12 plus the following:

- The exclusion under which the hazardous secondary materials will be managed for hazardous secondary materials managed in a land-based unit)
- When the facility expects to begin managing the hazardous secondary materials in accordance with the exclusion
- A list of hazardous secondary materials that will be managed according to the exclusion
- For each hazardous secondary material, whether the material, or any portion thereof, will be managed in a land-based unit
- The quantity of each hazardous secondary material to be managed annually

EPA is also requiring facilities that stop managing hazardous secondary materials in accordance with the exclusion to notify the EPA Regional Administrator within 30 days using EPA Form 8700-12. Records of notifications must be maintained for 3 years.

The final rule also includes the requirement that generators maintain records of shipments of excluded hazardous secondary materials to reclamation facilities for 3 years. These records would need to include the following for each shipment of excluded material:

- When the shipment occurred
- Who the transporter was
- Name and address of the destination reclamation facility and any intermediate facilities
- Type and quantity of the hazardous secondary material in the shipment

This record-keeping requirement may be fulfilled by ordinary business records, such as bills of lading.

Generators also are required to maintain records for each reclamation and intermediate facility that reasonable efforts were made to confirm that hazardous secondary materials will be properly and legitimately recycled, and not discarded. This certification should be signed and dated by an authorized representative of the generator before transferring the excluded

hazardous secondary materials to a reclamation or intermediate facility under 40 CFR 261.4(a)(24). The certification must incorporate specific certification language in 40 CFR 261.4(a)(24)(v)(C)(2). Documentation of reasonable efforts and the certification statement must be maintained by the generator for a minimum of 3 years and it must be made available upon request by a regulatory authority.

### Impacts on Existing Permits

The final rule also addresses RCRA permits that may regulate these waste streams. For units changing their status, based on this final rule, the permitted facility will need to submit a Class 1 permit modification to re-classify the units. If a unit is newly excluded, then the closure requirements would be removed from the permit with the modification.

### Potential Impact to NASA Centers

National Aeronautics and Space Administration (NASA) Centers potentially affected by this rule include those that generate or recycle hazardous secondary materials that currently are regulated as RCRA Subtitle C hazardous wastes, including the following:

- Byproducts
- Residues
- Unreacted feedstocks

Some examples of these types of materials include spent abrasive blast media or solvents. NASA solvents sent offsite for recycling currently are being managed as hazardous wastes. With the finalization of this rule, these spent solvents would become solid wastes (and not hazardous wastes). The wastes could be managed as solid wastes once the requirements for using an offsite facility (such as reasonable efforts and notifications) were completed. EPA's [Assessment of Good Practices for Recycling Secondary Hazardous Materials](#) was used to support this rulemaking and includes examples of good recycling practices.